Quick Reference Guide for Clinicians

Number 9

Management of Cancer Pain: Adults

Office of Minority Health
Resource Center
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- Pain Assessment
- Pharmacologic Management
- Physical and Psychosocial Interventions
- Nonpharmacologic Management
- Treating Elderly Patients
- Assessment and Management Tools

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U.S. Department of Health and Human Services
Public Health Service
Agency for Health Care Policy and Research

Management of Cancer Pain

Attention clinicians:

The *Clinical Practice Guideline* on which this *Quick Reference Guide for Clinicians* is based was developed by an interdisciplinary, private-sector panel comprising health care professionals and consumer representatives. Panel members were:

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This *Quick Reference Guide* focuses on pharmacologic, physical, and psychosocial ways to manage cancer pain. The approaches provided are both practical and flexible. Management of cancer pain in children is the subject of a separate *Quick Reference Guide.*

For a description of the guideline development process and information about the sponsoring agency (Agency for Health Care Policy and Research), see the *Clinical Practice Guideline: Management of Cancer Pain* (AHCPR Publication No. 94-0592). To receive additional copies of the *Clinical Practice Guideline,* the *Quick Reference Guides—Management of Cancer Pain: Adults* (AHCPR Publication No. 94-0593) or *Management of Cancer Pain: Infants, Children, and Adolescents* (AHCPR Publication No. 94-0594) and a patient booklet (AHCPR Publication No. 94-0595), call the National Cancer Institute at 1-800-4-CANCER or write: Cancer Pain Guideline, AHCPR Publications Clearinghouse, P.O. Box 8547, Silver Spring, MD 20907.

Note: This *Quick Reference Guide for Clinicians* contains excerpts from the *Clinical Practice Guideline.* The *Clinical Practice Guideline,* a critical synthesis of research and knowledge in the field, is designed to help any clinician working with cancer patients in any setting. The *Guideline* presents a thorough discussion of ways to manage procedure-induced pain and invasive modalities of pain control therapy, for use when simpler methods do not control pain. It also devotes considerable attention to pain control in special populations, including patients with concurrent medical and substance abuse problems, those with psychiatric problems related to pain and cancer, and members of minority and ethnic groups. Because pain problems in patients with HIV/AIDS are often assessed and treated using the same approaches as those used for cancer pain, HIV/AIDS pain is described as well. Practitioners should review the *Clinical Practice Guideline* carefully to become familiar with the various options for management of cancer pain and then use the *Quick Reference Guide* to help them remember the major points in managing cancer pain.

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Management of Cancer Pain: Adults

Purpose and Scope

Cancer pain can be managed effectively through relatively simple means in up to 90 percent of the 8 million Americans who have cancer or a history of cancer. Unfortunately, pain associated with cancer is frequently undertreated.

Although cancer pain or associated symptoms cannot always be entirely eliminated, appropriate use of available therapies can effectively relieve pain in the great majority of patients. Pain management extends beyond pain relief, encompassing the patient's quality of life and ability to work productively, to enjoy recreation, and to function normally in the family and society.

State and local laws often restrict the medical use of opioids to relieve cancer pain, and third-party payers may not reimburse for noninvasive pain control treatments. Thus, clinicians should work with regulators, State cancer pain initiatives, or other groups to eliminate these health care system barriers to effective pain management. Table 1 lists these and other barriers to effective pain management.

Flexibility is the key to managing cancer pain. As patients vary in diagnosis, stage of disease, responses to pain and interventions, and personal preferences, so must pain management. Figure 1 emphasizes that the recommended clinical approach focuses on patient involvement.

Highlights of Patient Management

Effective pain management is best achieved by a team approach involving patients, their families, and health care providers. The clinician should:

- Discuss pain and its management with patients and their families.
- Encourage patients to be active participants in their care.
- Reassure patients who are reluctant to report pain that there are many safe and effective ways to relieve pain.
- Consider the cost of proposed drugs and technologies.
- Share documented pain assessment and management with other clinicians treating the patient.
- Know State/local regulations for controlled substances.

Figure 1. Recommended clinical approach

A **Ask** about pain regularly.
Assess pain systematically.
B **Believe** the patient and family in their reports of pain and what relieves it.
C **Choose** pain control options appropriate for the patient, family, and setting.
D **Deliver** interventions in a timely, logical, coordinated fashion.
E **Empower** patients and their families.
Enable patients to control their course to the greatest extent possible.

Table 1. Barriers to cancer pain management

Problems related to health care professionals
- Inadequate knowledge of pain management.
- Poor assessment of pain.
- Concern about regulation of controlled substances.
- Fear of patient addiction.
- Concern about side effects of analgesics.
- Concern about patients becoming tolerant to analgesics.

Problems related to patients
- Reluctance to report pain.
  - Concern about distracting physicians from treatment of underlying disease.
  - Fear that pain means disease is worse.
  - Concern about not being a "good" patient.
- Reluctance to take pain medications.
  - Fear of addiction or of being thought of as an addict.
  - Worries about unmanageable side effects.
  - Concern about becoming tolerant to pain medications.

Problems related to the health care system
- Low priority given to cancer pain treatment.
- Inadequate reimbursement.
  - The most appropriate treatment may not be reimbursed or may be too costly for patients and families.
- Restrictive regulation of controlled substances.
- Problems of availability of treatment or access to it.

Figure 2 shows the sequence of activities related to pain assessment and management. The flowchart emphasizes the use of multiple modalities concurrently, beginning treatment with the least invasive modalities, and advancing treatment to meet the patient's need for pain relief.

Pain Assessment

Failure to assess pain is a critical factor leading to undertreatment. Assessment involves both the clinician and the patient. It should occur:

- At regular intervals after initiation of treatment.
- At each new report of pain.
- At a suitable interval after pharmacologic or nonpharmacologic intervention, e.g., 15-30 minutes after parenteral drug therapy and 1 hour after oral administration.

Identifying the etiology of pain is essential to its management. Clinicians treating patients with cancer should recognize the common cancer pain syndromes due to peripheral neuropathy (Table 2). Prompt diagnosis and treatment of these syndromes can reduce morbidity associated with unrelieved pain.

Initial Assessment

The goal of the initial assessment of pain is to characterize the pain by location, intensity, and etiology. Essential to initial assessment are:

- Detailed history.
- Physical examination.
- Psychosocial assessment.
- Diagnostic evaluation.

Patient Self-Report

The mainstay of pain assessment is the patient self-report. To enhance pain management across all settings, clinicians should teach families to use pain assessment tools in their homes. The clinician should help the patient to describe:

- **Pain.** Listen to the patient's descriptive words about the quality of the pain; these provide valuable clues to its etiology. Examples of simple self-report pain intensity scales include the simple descriptive, numeric, and visual analogue scales shown on page 23.
- **Location.** Ask the patient to indicate the exact location of the pain on his or her body, or on a body diagram and whether it radiates. See the sample pain history form on pages 24-25.
- **Intensity or severity.** Encourage the patient to keep a log of pain intensity scores to report during followup visits or by telephone.
- **Aggravating and relieving factors.** Ask when the patient experiences the most pain and the least pain. Document responses in the patient's chart.
- **Cognitive response to pain.** Note behavior suggesting pain in patients who are cognitively impaired or who have communication problems relating to education, language, ethnicity, or culture. Use appropriate (e.g., simpler or translated) pain assessment tools.
- **Goals for pain control.** Document the patient's preferred pain assessment tool and the goals for pain control (as scores on a pain scale) in the patient's pain history.

Followup Assessment

Continual assessment of cancer pain is crucial. Changes in pain pattern or the development of new

Figure 2. Continuing pain management

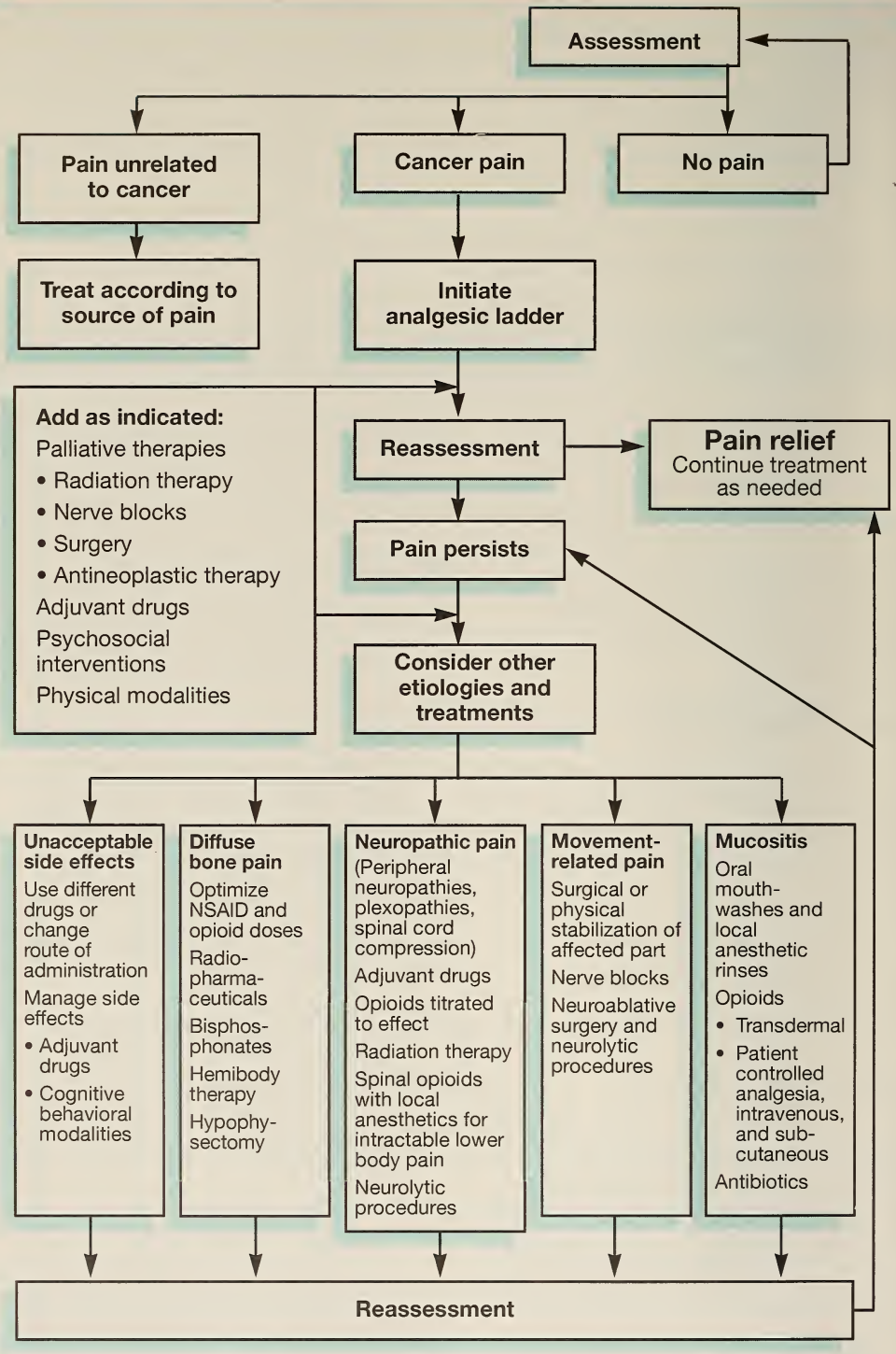


Table 2. Common cancer pain syndromes due to peripheral nerve injury

Pain syndrome	Associated signs and symptoms	Affected nerves
Tumor infiltration of a peripheral nerve	Constant, burning pain with dysesthesia in an area of sensory loss. Pain is radicular and often unilateral.	Peripheral
Postradical neck dissection	Tight, burning sensation in the area of sensory loss. Dysesthesias and shocklike pain may be present. Second type of pain may occur mimicking a drooped shoulder syndrome.	Cervical plexus
Postmastectomy pain	Tight, constricting, burning pain in the posterior arm, axilla, and anterior chest wall. Pain exacerbated by arm movement.	Intercostobrachial
Postthoracotomy pain	Aching sensation in the distribution of the incision with sensory loss with or without autonomic changes. Often exquisite point tenderness at the most medial and apical points of the scar with a specific trigger point. Secondary reflex sympathetic dystrophy may develop.	Intercostal
Postnephrectomy pain	Numbness, fullness, or heaviness in the flank, anterior abdomen, and groin. Dysesthesias are common.	Superficial flank
Postlimb amputation	Phantom limb pain usually occurs after pain in the same site before amputation. Stump pain occurs at the site of the surgical scar, several months to years after surgery. It is characterized by a burning dysesthetic sensation that is exacerbated by movement.	Peripheral endings and their central projections
Chemotherapy-induced peripheral neuropathy	Painful paresthesias and dysesthesias. Hyporeflexia. Less frequently: motor and sensory loss; rarely: autonomic dysfunction. Commonly associated with the vinca alkaloids, cisplatin, and Taxol.	Distal areas of peripheral (e.g., polyneuropathy)
Radiation-induced peripheral nerve tumors	May promote malignant fibrosarcoma. Painful, enlarging mass in a previously irradiated area. Patients with neurofibromatosis more susceptible.	Superficial and deep
Cranial neuropathies	Severe head pain with cranial nerve dysfunction. Leptomeningeal disease. Base of skull metastasis.	Cranial V, VII, IX, X, XI, XII are most common
Acute and postherpetic neuropathy	Painful paresthesia and dysesthesia. Constant burning and aching pain. Shocklike paroxysmal pain. Immunosuppression from disease or treatment is a risk factor; postherpetic neuropathy incidence increases with age.	Thoracic and cranial (VI) are most common

pain should trigger diagnostic evaluation and modification of the treatment plan. Persistent pain indicates the need to consider other etiologies (e.g. related to disease progression or treatment) and alternative (perhaps more invasive) treatments.

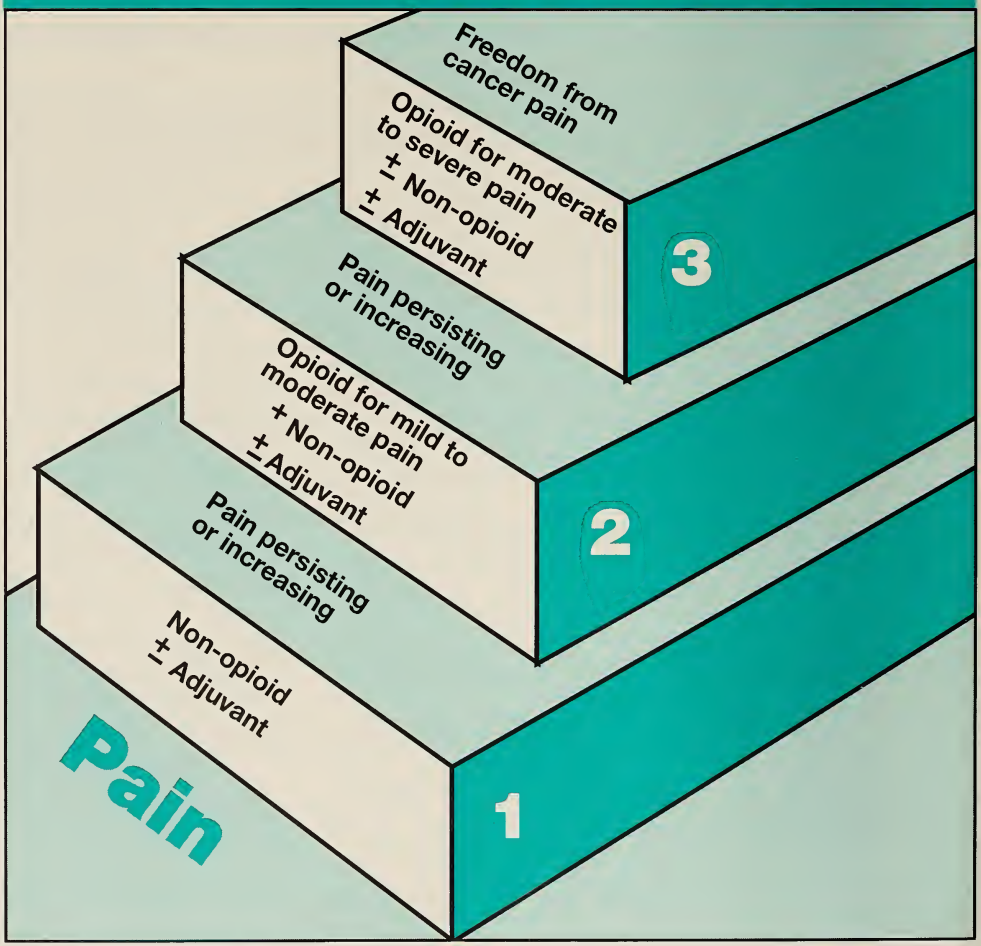
Pharmacologic Treatment Options

Drug therapy is the cornerstone of cancer pain management. It is effective, relatively low risk, inexpensive, and usually works quickly.

An essential principle in using medications to manage cancer pain is to individualize the regimen to the patient.

Even within the same family of analgesic drugs, individual variations in effects and side effects are well recognized. Recommendations for pharmacologic therapy begin with the WHO ladder (Figure 3), a three-step hierarchy for analgesic pain management. Substitution of drugs within a category should be tried before switching therapy:

Figure 3. WHO three-step analgesic ladder



Source: World Health Organization, 1990. Used with permission.

- Use the simplest dosage schedules and least invasive pain management modalities first.
- For mild to moderate pain, use (unless contraindicated) aspirin, acetaminophen, or non-steroidal anti-inflammatory drug (NSAID; WHO ladder, Step 1).
- When pain persists or increases, add an opioid (WHO ladder, Step 2).
- If pain continues or becomes moderate to severe, increase the opioid potency or dose (WHO ladder, Step 3).
- Schedule doses on a regular schedule (i.e.,"by the clock") to maintain the level of drug that will help prevent recurrence of pain. Ask for patient and family cooperation in establishing the effective level.
- Administer medications for long-term cancer pain on an around-the-clock basis, with additional doses "as needed."

Acetaminophen and NSAIDs

NSAIDs are effective for relief of mild pain, and have an opioid dose-sparing effect that helps reduce side effects when given with opioids for moderate to severe pain. Acetaminophen is included with aspirin and other NSAIDs because it has similar analgesic potency although it lacks peripheral anti-inflammatory activity. Side effects can occur at any time, and patients who take acetaminophen or NSAIDs—*especially elderly patients*—should be followed carefully.

- **Dosage.** Use patient response to determine the effective dosing interval for aspirin, acetaminophen, and other NSAIDs listed in Table 3. When pain relief is not attained with the maximum dosage of one NSAID, try other drugs within this category before abandoning NSAID therapy.
- **Route of administration.** Use readily available oral tablets, capsules, or liquid. During intervals of nausea and vomiting, use suppositories. Ketorolac tromethamine is the only NSAID available for parenteral use.
- **Contraindications.** *Do not use NSAIDs in patients with thrombocytopenia.* Patients taking NSAIDs (except acetaminophen) are at risk for platelet dysfunction that may impair blood clotting. Table 3 lists NSAIDs with minimal anti-platelet activity.
- **Other side effects.** Follow patients carefully for adverse effects, which range from mild gastrointestinal discomfort to more serious problems, including:

  Renal failure.

  Hepatic dysfunction.

  Bleeding.

  Gastric ulceration.

  Because both NSAIDs and other drugs (e.g., coumadin, methotrexate, digoxin, cyclosporin, oral antidiabetic agents, and sulfa drugs) are highly protein bound, there is potential for altered efficacy or toxicity when given simultaneously.

Table 3. Dosing data for acetaminophen and NSAIDs

Drug	Usual dose for adults ⩾ 50 kg body weight	Usual dose for adults[1] < 50 kg body weight
Acetaminophen and over-the-counter NSAIDs		
Acetaminophen[2]	650 mg q 4 h 975 mg q 6 h	10-15 mg/kg q 4 h 15-20 mg/kg q 4 h (rectal)
Aspirin[3]	650 mg q 4 h 975 mg q 6 h	10-15 mg/kg q 4 h 15-20 mg/kg q 4 h (rectal)
Ibuprofen (Motrin, others)	400-600 mg q 6 h	10 mg/kg q 6-8 h
Prescription NSAIDs		
Carprofen (Rimadyl)	100 mg tid	
Choline magnesium trisalicylate[4] (Trilisate)	1,000-1,500 mg tid	25 mg/kg tid
Choline salicylate (Arthropan)[4]	870 mg q 3-4 h	
Diflunisal (Dolobid)[5]	500 mg q 12 h	
Etodolac (Lodine)	200-400 mg q 6-8 h	
Fenoprofen calcium (Nalfon)	300-600 mg q 6 h	
Ketoprofen (Orudis)	25-60 mg q 6-8 h	
Ketorolac tromethamine[6] (Toradol)	10 mg q 4-6 h to a maximum of 40 mg/day	
Magnesium salicylate (Doan's, Magan, Mobidin, others)	650 mg q 4 h	
Meclofenamate sodium (Meclomen)[7]	50-100 mg q 6 h	

Opioids

Opioids, the major class of analgesics used in management of moderate to severe pain, are effective, easily titrated, and have a favorable benefit-to-risk ratio.

Opioid tolerance and physical dependence do not equate with "addiction."

The predictable consequences of long-term opioid administration—tolerance and physical dependence—are often confused with psychological dependence (addiction), that manifests as drug abuse. This misunderstanding can lead to ineffective prescribing, administering, or dispensing of opioids for cancer pain. The result is undertreatment.

Clinicians may be reluctant to give high doses of opioids to patients with advanced disease because of a fear of serious side effects. The clinician's ethical

Drug	Usual dose for adults ⩾ 50 kg body weight	Usual dose for adults[1] < 50 kg body weight
Prescription NSAIDs, continued		
Mefenamic acid (Ponstel)	250 mg q 6 h	
Naproxen (Naprosyn)	250-275 mg q 6-8 h	5 mg/kg q 8 h
Naproxen sodium (Anaprox)	275 mg q 6-8 h	
Sodium salicylate (Generic)	325-650 mg q 3-4 h	
Parenteral NSAIDs		
Ketorolac tromethamine[6, 8] (Toradol)	60 mg initially, then 30 mg q 6 h Intramuscular dose not to exceed 5 days	

[1] Acetaminophen and NSAID dosages for adults weighing less than 50 kg should be adjusted for weight.
[2] Acetaminophen lacks the peripheral anti-inflammatory and antiplatelet activities of the other NSAIDs.
[3] The standard against which other NSAIDs are compared. May inhibit platelet aggregation for ⩾1 week and may cause bleeding.
[4] May have minimal antiplatelet activity.
[5] Administration with antacids may decrease absorption.
[6] For short-term use only.
[7] Coombs-positive autoimmune hemolytic anemia has been associated with prolonged use.
[8] Has the same GI toxicities as oral NSAIDs.

Note: Only the above NSAIDs have FDA approval for use as simple analgesics, but clinical experience has been gained with other drugs as well.

Codes: q=every. tid=thrice daily.

duty—to benefit the patient by relieving pain—supports increasing doses, even at the risk of side effects. Because many patients with cancer pain become opioid tolerant during long-term opioid therapy, the clinician's fear of shortening life by increasing opioid doses is usually unfounded.

Opioids are classified as full morphine-like agonists, partial agonists, or mixed agonist-antagonists, depending on the specific receptors to which they bind and their activity at these receptors. The benefits of using opioids—and the risks associated with their use—vary among individuals. The following information about opioids is based on a more detailed discussion contained in the *Guideline.*

Full agonists, including morphine, hydromorphone, codeine, oxycodone, hydrocodone, methadone, levorphanol, and fentanyl, are classified as such because their

Table 4. Dose equivalents for opioid analgesics in opioid-naive adults ⩾50 kg[1]

Drug	Approximate equianalgesic dose		Usual starting dose for moderate to severe pain	
	Oral	Parenteral	Oral	Parenteral
Opioid agonist[2]				
Morphine[3]	30 mg q 3-4 h (repeat around-the-clock dosing) 60 mg q 3-4 h (single dose or intermittent dosing)	10 mg q 3-4 h	30 mg q 3-4 h	10 mg q 3-4 h
Morphine, controlled-release[3,4] (MS Contin, Oramorph)	90-120 mg q 12 h	N/A	90-120 mg q 12 h	N/A
Hydromorphone[3] (Dilaudid)	7.5 mg q 3-4 h	1.5 mg q 3-4 h	6 mg q 3-4 h	1.5 mg q 3-4 h
Levorphanol (Levo-Dromoran)	4 mg q 6-8 h	2 mg q 6-8 h	4 mg q 6-8 h	2 mg q 6-8 h
Meperidine[5] (Demerol)	300 mg q 2-3 h	100 mg q 3 h	N/R	100 mg q 3 h
Methadone (Dolophine, other)	20 mg q 6-8 h	10 mg q 6-8 h	20 mg q 6-8 h	10 mg q 6-8 h
Oxymorphone[3] (Numorphan)	N/A	1 mg q 3-4 h	N/A	1 mg q 3-4 h
Combination opioid/NSAID preparations[6]				
Codeine (with aspirin or acetaminophen)[7]	180-200 mg q 3-4 h	130 mg q 3-4 h	60 mg q 3-4 h	60 mg q 2 h (IM/SC)
Hydrocodone (in Lorcet, Lortab, Vicodin, others)	30 mg q 3-4 h	N/A	10 mg q 3-4 h	N/A
Oxycodone (Roxicodone, also in Percocet, Percodan, Tylox, others)	30 mg q 3-4 h	N/A	10 mg q 3-4 h	N/A

[1] Caution: Recommended doses do not apply for adult patients with body weight less than 50 kg. For recommended starting doses for adults < 50 kg body weight, see Table 5.
[2] Caution: Recommended doses do not apply to patients with renal or hepatic insufficiency or other conditions affecting drug metabolism and kinetics.
[3] Caution: For morphine, hydromorphone, and oxymorphone, rectal administration is an alternate route for patients unable to take oral medications. Equianalgesic doses may differ from oral and

effectiveness with increasing doses is not limited by a "ceiling." *Full agonists* will not reverse or antagonize the effects of other full agonists given simultaneously.

- **Morphine.** The most commonly used opioid, morphine is readily available in several forms, including sustained-acting (8-12 hours) tablets of morphine and long-acting (2-3 days) transdermal fentanyl patches.
- **Other agonists.** For the patient who experiences dose-limiting side effects with one oral opioid (e.g., hallucinations, nightmares, dysphoria, nausea, or mental clouding), other oral opioids should be tried before abandoning one route in favor of another. Patients receiving opioid analgesics "by the clock" should be provided oral or parenteral rapid-onset short-duration opioid agonists for breakthrough pain.
- **Meperidine (Demerol).** Useful for brief courses (few days) to treat acute pain, meperidine generally should be avoided in treating cancer pain due to its short duration of action (2.5-3.5 hours) and its toxic metabolite, normeperidine. Accumulation of this metabolite, particularly when renal function is impaired, causes central nervous system stimulation that may lead to seizures.

Partial agonists, such as buprenorphine, have less effect than full agonists at the opioid receptor. They are subject to a ceiling effect, thus are less effective analgesics.

Mixed agonist-antagonists block or are neutral at one type of opioid receptor while activating a different opioid receptor. Mixed agonist-antagonists are contraindicated for use in the patient receiving an opioid agonist because they may precipitate a withdrawal syndrome and increase pain. Mixed agonist-antagonists include pentazocine (Talwin), butorphanol tartrate (Stadol), denocine (Dalgan), and nalbuphine hydrochloride (Nubain). Their analgesic effectiveness is limited by a dose-related ceiling effect.

Dosage. *The appropriate dose is the amount of opioid that controls pain with the fewest side effects.* The need for increased doses of opioid often reflects progression of the disease. As patients develop opioid tolerance, they require more

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parenteral doses because of pharmacokinetic differences. **Note:** A short-acting opioid should normally be used for initial therapy of moderate to severe pain.

[4] Transdermal fentanyl (Duragesic) is an alternative option. Transdermal fentanyl dosage is not calculated as equianalgesic to a single morphine dosage. See the package insert for dosing calculations. Doses above 25 μg/h should not be used in opioid-naive patients.

[5] Not recommended. Doses listed are for brief therapy. Switch to another opioid for long-term therapy.

[6] Caution: Doses of aspirin and acetaminophen in combination opioid/NSAID preparations must also be adjusted to the patient's body weight.

[7] Caution: Codeine doses above 65 mg often are not appropriate because of diminishing incremental analgesia with increasing doses but continually increasing nausea, constipation, and other side effects.

Note: Published tables vary in the suggested doses that are equianalgesic to morphine. Clinical response is the criterion that must be applied for each patient; titration to clinical responses is necessary. Because there is not complete cross-tolerance among these drugs, it is usually necessary to use a lower than equianalgesic dose when changing drugs and to retitrate to response.

Codes: q=every. N/A=not available. N/R=not recommended. IM=intramuscular. SC=subcutaneous.

Table 5. Dose equivalents for opioid analgesics in opioid-naive adults <50 kg

Drug	Approximate equianalgesic dose		Usual starting dose for moderate to severe pain	
	Oral	Parenteral	Oral	Parenteral
Opioid agonist[1]				
Morphine[2]	30 mg q 3-4 h (repeat around-the-clock dosing) 60 mg q 3-4 h (single dose or intermittent dosing)	10 mg q 3-4 h	0.3 mg/kg q 3-4 h	0.1 mg/kg q 3-4 h
Morphine controlled-release[2,3] (MS Contin, Oramorph)	90-120 mg q 12 h	N/A	N/A	N/A
Hydromorphone[2] (Dilaudid)	7.5 mg q 3-4 h	1.5 mg q 3-4 h	0.06 mg/kg q 3-4 h	0.015 mg/kg q 3-4 h
Levorphanol (Levo-Dromoran)	4 mg q 6-8 h	2 mg q 6-8 h	0.04 mg/kg q 6-8 h	0.02 mg/kg q 6-8 h
Meperidine[4] (Demerol)	300 mg q 2-3 h	100 mg q 3 h	N/R	0.75 mg/kg q 2-3 h
Methadone (Dolophine, others)	20 mg q 6-8 h	10 mg q 6-8 h	0.2 mg/kg q 6-8 h	0.1 mg/kg q 6-8 h
Combination opioid/NSAID preparations[5]				
Codeine[6] (with aspirin or acetaminophen)	180-200 mg q 3-4 h	130 mg q 3-4 h	0.5-1 mg/kg q 3-4 h	N/R
Hydrocodone (in Lorcet, Lortab, Vicodin, others)	30 mg q 3-4 h	N/A	0.2 mg/kg q 3-4 h	N/A
Oxycodone (Roxicodone, also in Percocet, Percodan, Tylox, others)	30 mg q 3-4 h	N/A	0.2 mg/kg q 3-4 h	N/A

[1] Caution: Recommended doses do not apply to patients with renal or hepatic insufficiency or other conditions affecting drug metabolism and kinetics.
[2] Caution: For morphine, hydromorphone, and oxymorphone, rectal administration is an alternate route for patients unable to take oral medications. Equianalgesic doses may differ from oral and parenteral doses because of pharmacokinetic differences. **Note:** A short-acting opioid should normally be used for initial therapy of moderate to severe pain.
[3] Transdermal fentanyl (Duragesic) is an alternative option. Transdermal fentanyl dosage is not calculated as equianalgesic to a single morphine dosage. See the package insert for dosing calculations. Doses above 25 μg/h should not be used in opioid-naive patients.

frequent dosing. Tables 4 and 5 list equianalgesic initial doses of commonly used opioids for adults weighing over and under 50 kg (110 pounds), respectively. Points to keep in mind include:

- **Titration.** Increase or decrease the next dose by one-quarter to one-half of the previous dose.
- **Route conversion.** When changing from the oral to the rectal route, begin with the oral dose, then titrate upward frequently and carefully. Lower doses are required for parenteral routes but are similar for subcutaneous, intramuscular, and intravenous routes.
- **Schedule.** Prevent recurring pain rather than having to subdue it. Give analgesics on a regular schedule to prevent a loss of effectiveness between doses.
- **Tolerance.** Assume that patients actively abusing heroin or prescription opioids (including methadone) have some pharmacologic tolerance that will require higher starting doses and shorter dosing intervals.
- **Cessation of opioids.** When a patient becomes pain free as a result of cancer treatment or palliation (e.g., nerve destruction), gradually decrease the opioid to avoid the withdrawal.
- **Opioid therapy in special populations.** The *Guideline* gives specific instructions for opioid use in elderly, children, persons physically or cognitively impaired, and known or suspected drug abusers.

Route of Administration

Oral administration is preferred because it is convenient and usually cost-effective. When patients cannot take oral medications, other less invasive (e.g., rectal or transdermal) routes should be offered. Parenteral methods should be used only when simpler, less demanding, less costly methods are inappropriate or ineffective. Assessing the patient's response to several different oral opioids is usually advisable before abandoning the oral route in favor of anesthetic, neurosurgical, or other invasive approaches.

- **Rectal.** Use this safe, inexpensive, effective route for delivery of opioids as well as non-opioids when patients have nausea or vomiting. Rectal administration is inappropriate for the patient who has diarrhea, anal/rectal lesions, or mucositis; who is thrombocytopenic or neutropenic; who is physically unable to place the suppository in the rectum; or who prefers other routes.

[4] Not recommended. Doses listed are for brief therapy. Switch to another opioid for long-term therapy.
[5] Caution: Doses of aspirin and acetaminophen in combination opioid/NSAID preparations must also be adjusted to the patient's body weight.
[6] Caution: Some clinicians recommend not exceeding 1.5 mg/kg of codeine because of an increased incidence of side effects with higher doses.

Note: Published tables vary in the suggested doses that are equianalgesic to morphine. Clinical response is the criterion that must be applied for each patient; titration to clinical responses is necessary. Because there is not complete cross-tolerance among these drugs, it is usually necessary to use a lower than equianalgesic dose when changing drugs and to retitrate to response.

Codes: q=every. N/A=not available. N/R=not recommended.

Table 6. Advantages and disadvantages of intraspinal drug administration

System	Advantages	Disadvantages
Percutaneous temporary catheter	Used extensively both intraoperatively and postoperatively. Useful when prognosis is limited (< 1 month).	Mechanical problems include catheter dislodgment, kinking,or migration.
Permanent silicone-rubber epidural	Catheter implantation is a minor procedure. Dislodgment and infection less common than with temporary catheters. Can deliver bolus injections, continuous infusions, or PCA (with or without continuous delivery).	
Subcutaneous implanted injection port	Increased stability, less risk of dislodgment. Can deliver bolus injections or continuous infusions (with or without PCA).	Implantation more invasive than external catheters. Approved only for epidural catheter in U.S. Potential for infection increases with frequent injections.
Subcutaneous reservoir	Potentially, reduced infection in comparison to external system.	Difficult to access, and fibrosis may occur after repeated injection.
Implanted pumps (continuous and programmable)	Potentially, decreased risk of infection.	Need for more extensive operative procedure. Need for specialized, costly equipment with programmable systems.

- **Transdermal (fentanyl).** This route is not suitable for rapid dose titration. Hence, use this route for relatively stable pain when rapid increases or decreases in intensity are not likely.

- **Injection or infusion.** Intravenous and subcutaneous routes provide effective opioid delivery.

  Avoid the intramuscular route because of unreliable absorption, pain, and inconvenience.

Intravenous administration provides the most rapid onset of analgesia, but the duration of analgesia after a bolus dose is shorter than with other routes. In patients requiring continuous intravenous access for other purposes, this route of opioid infusion is cost effective and provides a consistent level of analgesia. When intravenous access is not feasible, subcutaneous opioid infusion is practical in the hospital or home.

- **Patient-controlled analgesia (PCA).** Use PCA to help the patient maintain independence and control by matching drug delivery to the need for analgesia. The opioid may be administered orally or via a dedicated portable pump to deliver the drug intravenously, subcutaneously, or epidurally (intraspinally).
- **Intraspinal.** Consider this invasive route for patients who develop intractable pain or intolerable side effects with other routes. Use of this route requires skill and expertise that may not be available in all settings. Table 6 presents the advantages and disadvantages of intraspinal administration.

  The main indication for long-term administration of intraspinal opioids is intractable pain in the lower part of the body, particularly bilateral or midline pain. Profound analgesia is possible without motor, sensory, or sympathetic blockade.

Drugs and Routes Not Recommended

Table 7 presents data on drugs and routes of administration not recommended for the management of cancer pain.

Side Effects

Clinicians who follow patients during long-term opioid treatment should watch for potential side effects and use adjuvant agents to counteract them.

- **Constipation.** Treat constipation (an inevitable side effect) prophylactically with dietary fiber or regularly scheduled doses of mild laxative. Severe constipation may require treatment with a stimulating cathartic, (e.g., bisadocyl, standardized senna concentrate, or hyperosmotic agents, orally or via suppository).
- **Nausea and vomiting.** Treat with anti-emetics such as phenothiazines or metoclopramide. Depending on the anti-emetic chosen, monitor the patient for increased sedation.
- **Sedation and mental clouding.** When possible, treat persistent drug-induced sedation by reducing the dose and increasing the frequency of opioid administration. CNS stimulants such as caffeine, dextroamphetamine, pemoline, and methylphenidate also help decrease opioid sedative effects.
- **Respiratory depression.** Patients receiving long-term opioid therapy generally develop tolerance to the respiratory depressant effects of these agents. When indicated for reversal of opioid-induced respiratory depression, administer naloxone, titrated in small increments to improve respiratory function without reversing analgesia. Monitor the patient carefully until the episode of respiratory depression resolves.
- **Subacute overdose.** Far more common than acute respiratory depression, subacute overdose manifests as slowly progressive

Table 7. Drugs and routes of administration not recommended for treatment of cancer pain

Class	Drug	Rationale for not recommending
Opioids	Meperidine	Short (2-3 hour) duration. Repeated administration may lead to CNS toxicity (tremor, confusion, or seizures). High oral doses required to relieve severe pain, and these increase the risk of CNS toxicity.
Miscellaneous	Cannabinoids	Side effects of dysphoria, drowsiness, hypotension, and bradycardia preclude its routine use as an analgesic.
	Cocaine	Has demonstrated no efficacy as an analgesic or coanalgesic in combination with opioids.
Opioid agonist-antagonists	Pentazocine Butorphanol Nalbuphine	Risk of precipitating withdrawal in opioid-dependent patients. Analgesic ceiling. Possible production of unpleasant psychomimetic effects (e.g., dysphoria, hallucinations).
Partial agonist	Buprenorphine	Analgesic ceiling. Can precipitate withdrawal.
Antagonist	Naloxone Naltrexone	May precipitate withdrawal. Limit use to treatment of life-threatening respiratory depression.
Combination preparations	Brompton's cocktail	No evidence of analgesic benefit to using Brompton's cocktail over single opioid analgesics.
	DPT (Meperidine, Promethazine, and Chlorpromazine)	Efficacy is poor compared with that of other analgesics. High incidence of adverse effects.
Anxiolytics alone	Benzodiazepine (e.g., alprazolam)	Analgesic properties not demonstrated except for some instances of neuropathic pain. Added sedation from anxiolytics may limit opioid dosing.
Sedative/ hypnotic drugs alone	Barbiturates Benzodiazepine	Analgesic properties not demonstrated. Added sedation from sedative/hypnotic drugs limits opioid dosing.

Routes of administration	Rationale for not recommending
Intramuscular (IM)	Painful. Absorption unreliable. Should not be used for children or patients prone to develop dependent edema or in patients with thrombocytopenia.
Transnasal	The only drug approved by the FDA for transnasal administration at this time is butorphanol, an agonist-antagonist drug, which generally is not recommended. (See opioid agonist-antagonists above.)

(hours to days) somnolence and respiratory depression. Withhold one or two doses until the symptoms have resolved, then reduce the standing dose by 25 percent.

- **Other opioid side effects.** Dry mouth, urinary retention, pruritis, myoclonus, altered cognitive function, dysphoria, euphoria, sleep disturbances, sexual dysfunction, physiologic dependence, tolerance, and inappropriate secretion of antidiuretic hormone.

Adjuvant Drugs

Adjuvant drugs are valuable during all phases of pain management to enhance analgesic efficacy, treat concurrent symptoms, and provide independent analgesia for specific types of pain. Adjuvants include:

- **Corticosteroids** provide a range of effects including mood elevation, anti-inflammatory activity, antiemetic activity, and appetite stimulation and may be beneficial in the management of cachexia and anorexia. They also reduce cerebral and spinal cord edema and are essential in the emergency management of elevated intracranial pressure and epidural spinal cord compression.
- **Anticonvulsants** are used to manage neuropathic pain, especially lancinating or burning pain. Use with caution in cancer patients undergoing marrow-suppressant therapies, such as chemotherapy and radiation therapy.
- **Antidepressants** are useful in pharmacologic management of neuropathic pain. These drugs have innate analgesic properties and may potentiate the analgesic effects of opioids. The most widely reported experience has been with amitriptyline; therefore, it should be viewed as the tricyclic agent of choice.
- **Neuroleptics,** particularly methotrimeprazine, have been used to treat chronic pain syndromes. Methotrimeprazine lacks opioid inhibiting effects on gut motility and may be useful for treating opioid-induced intractable constipation or other dose-limiting side effects. It also has anti-emetic and anxiolytic effects.
- **Local anesthetics** have been used to treat neuropathic pain. Side effects for these may be greater than with other drugs used to treat neuropathic pain.
- **Hydroxyzine** is a mild anxiolytic agent with sedating and analgesic properties that is useful in treating the anxious patient with pain. This antihistamine also has antiemetic properties.
- **Psychostimulants** may be useful in reducing opioid-induced sedation when opioid dose adjustment (i.e., reduced dose and increased dose frequency) is not effective.

Placebos should not be used in the management of cancer pain.

Physical and Psychosocial Interventions

Patients should be encouraged to remain active and participate in self-care when possible. Noninvasive physical and psychosocial modalities can be used concurrently with drugs and other interventions to manage pain during all phases of treatment. The effectiveness of these modalities depends upon the patient's participation and communication of which methods best alleviate pain.

Physical Modalities

Generalized weakness, deconditioning, and aches and pains associated with cancer diagnosis and therapy may be treated by:

- **Cutaneous stimulation.** Noninvasive techniques that can be taught to the patient or family caregiver include

  Heat. Avoid burns by wrapping the heat source (e.g., hot pack or heating pad) in a towel. The use of heat on irradiated tissue is contraindicated, and diathermy and ultrasound are not recommended for use over tumor sites.

  Cold. Apply flexible ice packs that conform to body contours for periods not to exceed 15 minutes. Cold treatment provides longer-lasting relief than heat but should not be used in patients with peripheral vascular disease or on tissue damaged by radiation therapy.

  Massage, pressure, and vibration. These methods, which help the patient through distraction or relaxation, sometimes increase pain before relief occurs. Massage should not be substituted for exercise in ambulatory patients.

- **Exercise.** Useful in treating subacute and chronic pain, exercise strengthens weak muscles, mobilizes stiff joints, helps restore coordination and balance, enhances patient comfort, and provides cardiovascular conditioning. Therapists and trained family or other caregivers can assist the functionally-limited patient with range-of-motion exercises to help preserve strength and joint function. During acute pain, exercise should be limited to self-administered range-of-motion. Weight-bearing exercise should be avoided when bone fracture is likely.

- **Repositioning.** Reposition the immobilized patient frequently to maintain correct body alignment and prevent or alleviate pain and, possibly, pressure ulcers.

- **Immobilization.** Use restriction of movement to manage acute pain or to stabilize fractures or otherwise compromised limbs or joints. Use adjustable elastic or thermoplastic braces to help maintain correct body alignment. Keep joints in positions of maximal function rather than maximal range. Avoid prolonged immobilization.

- **Counterstimulation.**

  Transcutaneous electrical nerve stimulation (TENS). Controlled, low-voltage electrical stimulation applied to large myelinated peripheral nerve fibers via cutaneous electrodes to inhibit pain transmission. Although part of the efficacy of TENS can be attributed to a placebo effect, patients with mild pain may benefit from a trial of TENS to see if it is effective in reducing the pain.

  Acupuncture. Pain treated by inserting small, solid needles into the skin. Because pain can signal disease progression, infection or treatment complication, patients who choose acupuncture should be encouraged to report new pain problems to their health care team before using this means of pain relief.

Cognitive-Behavioral Interventions

Cognitive-behavioral interventions are an important part of a multimodal approach to pain management. They help to give the patient a sense of control and to develop coping skills to deal with the pain.

Interventions introduced early in the course of illness are more likely to succeed because they can be learned and practiced by patients while they have sufficient strength and energy. Patients and their families should be given information about and encouraged to try several strategies, and to select one or more of these cognitive-behavioral techniques to use regularly:

- **Relaxation and imagery.** Simple relaxation techniques (see examples on pages 26-27) should be used for episodes of brief pain (e.g., during procedures). Brief, simple techniques such as those shown should be used when the patient's ability to concentrate is compromised by severe pain, a high level of anxiety, or fatigue.
- **Cognitive distraction and reframing.** Focusing attention on stimuli other than pain or negative emotions accompanying pain may involve distractions that are internal (e.g., counting, praying, or making self-statements such as "I can cope,"), external (e.g., music, television, talking, listening to someone read), or exercises (e.g., rhythmic massage or use of a visual focal point.) In the related technique, cognitive reappraisal, patients learn to monitor and evaluate negative thoughts and replace them with more positive thoughts and images.
- **Patient education.** Both oral and written information and instructions should be provided about pain, pain assessment, and the use of drugs and other methods of pain relief. Patient education should emphasize that almost all pain can be effectively managed. Major barriers to effective pain management (Table 1) should be discussed to correct patient misconceptions.
- **Psychotherapy and structured support.** Some patients benefit from short-term psychotherapy provided by professionals with training in psychotherapy.

Patients whose pain is particularly difficult to manage (e.g., substance abusers) and those who develop symptoms of clinical depression or another adjustment disorder should be referred to professionals with training in psychotherapy. The relationship between poorly controlled pain, depression, and thoughts of suicide should not be ignored.

- **Support groups and pastoral counseling.** Because many patients benefit from peer support groups, clinicians should be aware of locally active groups and offer this information to patients and their families. Pastoral counseling members of the health care team should participate in meetings to discuss patients' needs and treatment. They should be a source of information on community resources for spiritual care and the support of patients and their families.

Invasive Interventions

With rare exception, less invasive analgesic approaches should precede invasive palliative approaches. However, for a minority of patients in whom behavioral, physical, and drug therapy do not alleviate pain, invasive therapies are useful. The *Guideline* discusses radiation and surgery as pain relief measures rather than as cures for primary disease.

Radiation Therapy

Local or whole-body radiation enhances the effectiveness of analgesic drug and other noninvasive therapy by directly affecting the cause of pain (i.e., reducing primary and metastatic tumor bulk). Dosage must be chosen to achieve a balance between the amount of radiation required to kill tumor cells and that which would adversely affect normal cells or allow the repair of damaged tissue.

A single intravenous injection of beta particle-emitting agents such as iodine-131, phosphorus-32-orthophosphate, and strontium-89, as well as the investigational new drugs rhenium-186 and samarium-153, can relieve pain of widespread bony metastases. Half the patients so treated respond to a second treatment if pain recurs.

Surgery

Curative excision or palliative debulking of a tumor has potential to reduce pain directly, relieve symptoms of obstruction or compression, and improve prognosis, even increasing long-term survival. Oncologic surgeons and other health care providers should be familiar with the interactions of chemotherapy, radiation therapy, and surgical interventions to avoid or anticipate iatrogenic complications. They should also recognize characteristic pain syndromes that follow specific surgical procedures.

Nerve Blocks

Control of otherwise intractable pain can be achieved by the relatively brief application of a local anesthetic or neurolytic agent. In the management of cancer pain, nerve blocks are performed for several reasons:

Diagnostic—to determine the source of pain (e.g., somatic versus sympathetic pathways)

Therapeutic—to treat painful conditions that respond to nerve blocks (e.g., celiac block for pain of pancreatic cancer)

Prognostic—to predict the outcome of long-lasting interventions (e.g., infusions, neurolysis, rhizotomy)

Preemptive—to prevent painful sequelae of procedures that may cause phantom limb, causalgia, or reflex sympathetic dystrophy.

A single injection of a non-destructive agent such as lidocaine or bupivacaine, alone or in combination with an anti-inflammatory corticosteroid for a longer-lasting effect, can provide local relief from nerve or root compression. Placement of an infusion catheter at a sympathetic ganglion extends the sympathetic blockade from hours to days or weeks. Destructive agents such as ethanol or phenol can be used to effect peripheral neurolysis at sites identified by local anesthesia as appropriate for permanent pain relief.

Neurosurgery

Ablation of pain pathways should, like neurolytic blockade, be reserved for situations in which other therapies are ineffective or poorly tolerated. Neurosurgery can be performed to implant devices to deliver drugs or to electrically stimulate neural structures. The *Guideline* provides a list of indications for specific procedures. In general, the choice of neurosurgical procedure is based on location and type of pain (somatic, visceral, deafferentation), the patient's general condition and life expectancy, and the expertise and followup available.

Management of Procedural Pain

Many diagnostic and therapeutic procedures are painful to patients. Treat anticipated procedure-related pain prophylactically and integrate pharmacologic and nonpharmacologic interventions in a complementary style.

Use local anesthetics and short-acting opioids to manage procedure-related pain, allowing adequate time for the drug to achieve full therapeutic effect. Anxiolytics and sedatives may be used to reduce anxiety or to produce sedation.

Cognitive-behavioral interventions, such as imagery or relaxation, are useful in managing procedure-related pain and anxiety. Massage, pressure, or vibration may also aid relaxation. Examples of relaxation exercises are provided on pages 26-27. Applications of heat or cold may be useful in managing pain due to inflammation.

Offer the option for a relative or friend to accompany the patient for support.

Discharge Planning

Patients and families may have difficulty remembering details of the pain management plan. Therefore, they should be given a written pain management plan. See the patient booklet *Managing Cancer Pain* (AHCPR Publication No. 94-0595) for a sample pain management plan and pain log.

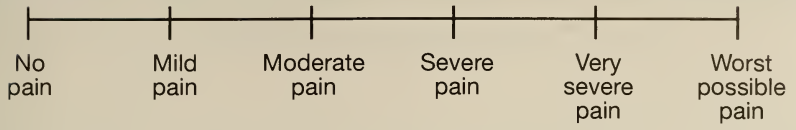
Treating Cancer Pain in the Elderly

Like other adults, elderly patients require comprehensive assessment and aggressive management of cancer pain. However, older patients are at risk for undertreatment of pain because of underestimation of their sensitivity to pain, the expectation that they tolerate pain well, and misconceptions about their ability to benefit from the use of opioids. Issues in assessing and treating cancer pain in older patients include:

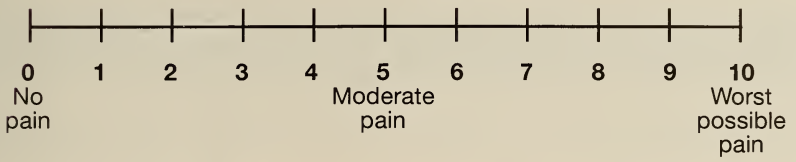
- **Multiple chronic diseases and sources of pain.** Complex medication regimens place them at increased risk for drug-drug and drug-disease interactions.
- **Visual, hearing, motor, and cognitive impairments.** The use of simple descriptive, numeric, and visual analog pain assessment instruments may be impeded. Cognitively impaired patients may require simpler scales and more frequent pain assessment.
- **NSAID side effects.** Although effective alone or as adjuncts to opioids, NSAIDs are more likely to cause gastric and renal toxicity and other drug reactions such as cognitive impairment, constipation, and headaches in older patients. Alternative NSAIDs (e.g., choline magnesium trisalicylate) or co-administration of misoprostol should be considered to reduce gastric toxicity.
- **Opioid effectiveness.** Older persons tend to be more sensitive to the analgesic effects of opioids. The peak opioid effect is higher and the duration of pain relief is longer.
- **Patient-controlled analgesia.** Slower drug clearance and increased sensitivity to undesirable drug effects (e.g., cognitive impairment) indicate the need for cautious initial dosing and subsequent titration and monitoring.
- **Alternative routes of administration.** Although useful for patients who have nausea or vomiting, the rectal route may be inappropriate for elderly or infirm patients who are physically unable to place the suppository in the rectum.
- **Postoperative pain control.** Following surgery, surgeons and other health care team members should maintain frequent direct contact with the elderly patient to reassess the quality of pain management.
- **Change of setting.** Reassessment of pain management and appropriate changes should be made whenever the elderly patient moves (e.g., from hospital to home or nursing home).

Pain intensity scales

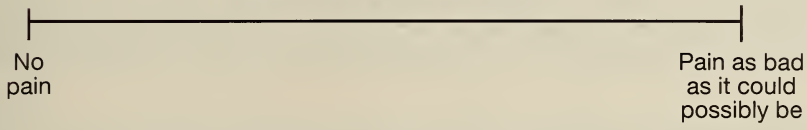
Simple Descriptive Pain Intensity Scale[1]



0–10 Numeric Pain Intensity Scale[1]



Visual Analog Scale (VAS)[2]



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[1] If used as a graphic rating scale, a 10-cm baseline is recommended.
[2] A 10-cm baseline is recommended for VAS scales.

Brief Pain Inventory (Short Form)

Study ID#_____ Hospital#_____

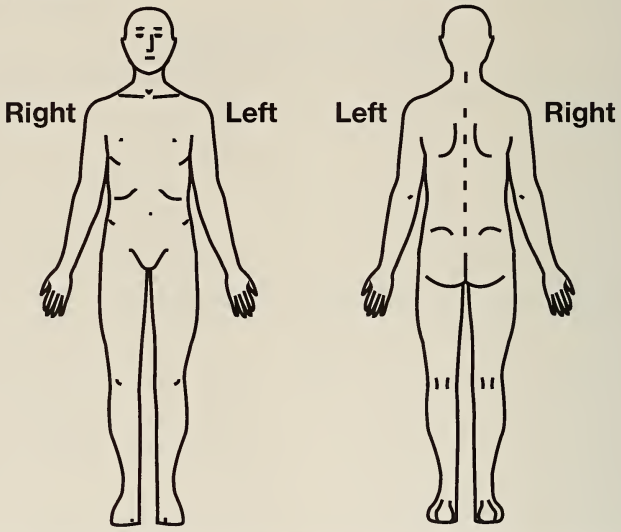
Do not write above this line

Date: _____/_____/_____ Time:_____

Name:_____ _____ _____
Last First Middle Initial

1) Throughout our lives, most of us have had pain from time to time (such as minor headaches, sprains, and toothaches). Have you had pain other than these everyday kinds of pain today? 1. Yes 2. No

2) On the diagram, shade in the areas where you feel pain. Put an X on the area that hurts the most.



3) Please rate your pain by circling the one number that best describes your pain at its **worst** in the past 24 hours.

0 1 2 3 4 5 6 7 8 9 10
No pain — Pain as bad as you can imagine

4) Please rate your pain by circling the one number that best describes your pain at its **least** in the past 24 hours.

0 1 2 3 4 5 6 7 8 9 10
No pain — Pain as bad as you can imagine

5) Please rate your pain by circling the one number that best describes your pain on the **average.**

0 1 2 3 4 5 6 7 8 9 10
No pain — Pain as bad as you can imagine

6) Please rate your pain by circling the one number that tells how much pain you have **right now.**

0	1	2	3	4	5	6	7	8	9	10
No pain										Pain as bad as you can imagine

7) What treatments or medications are you receiving for your pain?

---

8) In the past 24 hours, how much **relief** have pain treatments or medications provided? Please circle the one percentage that most shows how much relief you have received.

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
No relief										Complete relief

9) Circle the one number that describes how, during the past 24 hours, **pain has interfered** with your:

A. General activity

0	1	2	3	4	5	6	7	8	9	10
Does not interfere										Completely interferes

B. Mood

0	1	2	3	4	5	6	7	8	9	10
Does not interfere										Completely interferes

C. Walking ability

0	1	2	3	4	5	6	7	8	9	10
Does not interfere										Completely interferes

D. Normal work (includes both work outside the home and housework)

0	1	2	3	4	5	6	7	8	9	10
Does not interfere										Completely interferes

E. Relations with other people

0	1	2	3	4	5	6	7	8	9	10
Does not interfere										Completely interferes

F. Sleep

0	1	2	3	4	5	6	7	8	9	10
Does not interfere										Completely interferes

G. Enjoyment of life

0	1	2	3	4	5	6	7	8	9	10
Does not interfere										Completely interferes

Source: Pain Research Group, Department of Neurology, University of Wisconsin-Madison. Used with permission. May be duplicated and used in clinical practice.

Relaxation exercises

Exercise 1. Slow rhythmic breathing for relaxation

1. Breathe in slowly and deeply.
2. As you breathe out slowly, feel yourself beginning to relax; feel the tension leaving your body.
3. Now breathe in and out slowly and regularly, at whatever rate is comfortable for you. You may wish to try abdominal breathing.
4. To help you focus on your breathing and breathe slowly and rhythmically: (a) breathe in as you say silently to yourself, "in, two, three"; (b) breathe out as you say silently to yourself, "out, two, three." **or**

   Each time you breathe out, say silently to yourself a word such as "peace" or "relax."
5. Do steps 1 through 4 only once or repeat steps 3 and 4 for up to 20 minutes.
6. End with a slow deep breath. As you breathe out say to yourself, "I feel alert and relaxed."

Source: McCaffery and Beebe, 1989. Adapted and reprinted with permission.

Exercise 2. Simple touch, massage, or warmth for relaxation

Touch and massage are age-old methods of helping others relax. Some examples are:

(1) Brief touch or massage, e.g., handholding or briefly touching or rubbing a person's shoulder.

(2) Warm foot soak in a basin of warm water, or wrap the feet in a warm, wet towel.

(3) Massage (3 to 10 minutes) may consist of whole body or be restricted to back, feet, or hands. If the patient is modest or cannot move or turn easily in bed, consider massage of the hands and feet.

- Use a warm lubricant, e.g., a small bowl of hand lotion may be warmed in the microwave oven, or a bottle of lotion may be warmed by placing it in a sink of hot water for about 10 minutes.
- Massage for relaxation is usually done with smooth, long, slow strokes. (Rapid strokes, circular movements, and squeezing of tissues tend to stimulate circulation and increase arousal.) However, try several degrees of pressure along with different types of massage, e.g., kneading, stroking, and circling. Determine which is preferred.

Especially for the elderly person, a back rub that effectively produces relaxation may consist of no more than 3 minutes of slow, rhythmic stroking (about 60 strokes per minute) on both sides of the spinous process from the crown of the head to the lower back. Continuous hand contact is maintained by starting one hand down the back as the other hand stops at the lower back and is raised. Set aside a regular time for the massage. This gives the patient something to look forward to and depend on.

Source: McCaffery and Beebe, 1989. Adapted and reprinted with permission.

Exercise 3. Peaceful past experiences

Something may have happened to you a while ago that brought you peace and comfort. You may be able to draw on that past experience to bring you peace or comfort now. Think about these questions:

1. Can you remember any situation, even when you were a child, when you felt calm, peaceful, secure, hopeful, or comfortable?
2. Have you ever daydreamed about something peaceful? What were you thinking of?
3. Do you get a dreamy feeling when you listen to music? Do you have any favorite music?
4. Do you have any favorite poetry that you find uplifting or reassuring?
5. Have you ever been religiously active? Do you have favorite readings, hymns, or prayers? Even if you haven't heard or thought of them for many years, childhood religious experiences may still be very soothing.

Additional points: Very likely some of the things you think of in answer to these questions can be recorded for you, such as your favorite music or a prayer. Then, you can listen to the tape whenever you wish. Or, if your memory is strong, you may simply close your eyes and recall the events or words.

Source: McCaffery and Beebe, 1989. Adapted and reprinted with permission.

Exercise 4. Active listening to recorded music

1. Obtain the following:
   - A cassette player or tape recorder. (Small, battery-operated ones are more convenient.)
   - Earphone or headset. (This is a more demanding stimulus than a speaker a few feet away, and it avoids disturbing others.)
   - Cassette of music you like. (Most people prefer fast, lively music, but some select relaxing music. Other options are comedy routines, sporting events, old radio shows, or stories.)
2. Mark time to the music, e.g., tap out the rhythm with your finger or nod your head. This helps you concentrate on the music rather than your discomfort.
3. Keep your eyes open and focus steadily on one stationary spot or object. If you wish to close your eyes, picture something about the music.
4. Listen to the music at a comfortable volume. If the discomfort increases, try increasing the volume; decrease the volume when the discomfort decreases.
5. If this is not effective enough, try adding or changing one or more of the following: massage your body in rhythm to the music; try other music; mark time to the music in more than one manner, e.g., tap your foot and finger at the same time.

Additional points: Many patients have found this technique to be helpful. It tends to be very popular, probably because the equipment is usually readily available and is a part of daily life. Other advantages are that it is easy to learn and is not physically or mentally demanding. If you are very tired, you may simply listen to the music and omit marking time or focusing on a spot.

Source: McCaffery and Beebe, 1989. Adapted and reprinted with permission.

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Abstract

This *Quick Reference Guide for Clinicians* contains highlights from the Clinical Practice Guideline on Management of Cancer Pain, which was developed by a private-sector panel of health care providers and consumers. Selected aspects of evaluating and managing pain in adults with cancer pain are presented. Topics covered include initial assessment, pharmacologic treatment, administration of medications, side effects of medications, adjuvant medications, cognitive-behavioral interventions, and discussion of other more invasive palliative techniques. A flowchart is included that shows the sequence of events in evaluating and managing cancer pain, as well as drug dosing tables and forms to assist the clinician and patient to adequately describe and assess pain.

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